

AMBLER ASBESTOS SHINGLES

A.I.A. 12—F-1

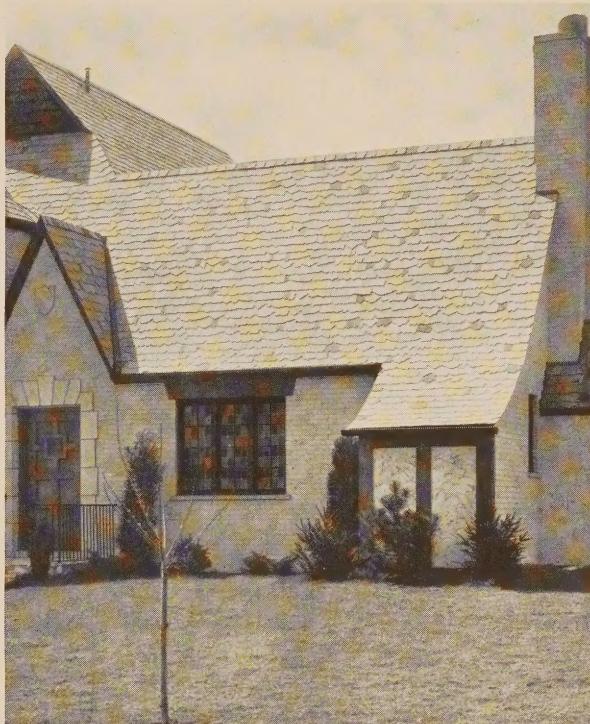


**AMBLER
ASBESTOS SHINGLE & SHEATHING
COMPANY**

SOLD BY
**KEASBEY & MATTISON
COMPANY
AMBLER, PENNA.**

**AMBLER, PENNA.
ST. LOUIS, MO.**

AMBLER ASBESTOS SHINGLES



Manufactured and sold by the

AMBLER ASBESTOS SHINGLE & SHEATHING COMPANY

Main Offices: Ambler, Penna.

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Ambler Asbestos Products

Include

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(Note)—Separate catalogs are available on Ambler Linabestos, Corrugated, Asbestos Lumber and Ebonized Asbestos, also on Keasbey & Mattison Company's Products.



The Advantages of Ambler Asbestos Shingles

THE first American-made Asbestos Shingles were manufactured by this company in 1905. The objective was to produce a perfect roof covering—one that would be fireproof, and weatherproof, and at the same time architecturally artistic.

After careful experimenting, a well-balanced formula of Portland cement colloided around a network of long, strong Chrysotile asbestos fibres was developed. This mixture was subjected to enormous hydraulic pressure. The perfection of this product marked a decided advance in the building industry.

Ambler Asbestos Shingles are rigid and strong. They are fireproof, not merely fire-resistant; asbestos cannot burn.

Ambler Asbestos Shingles withstand all climates and extremes of weather. They may be frozen and thawed any number of times; they may be heated and quickly cooled, and they will be found intact at the end of these tests. Exposed to the elements for month after month, they become even harder and stronger because of the hydration and subsequent hardening of the cement content which takes place.

They may be applied to any roof of reasonable pitch. They are readily cut to fit around dormer windows, chimneys, etc., and may be laid on such difficult surfaces as cupolas and slightly curved roofs.

Exposed to the action of salt air for years, these shingles will not undergo the slightest deterioration or

change. Because of their long life under the most severe conditions, they really become the most economical form of roofing.

The first Ambler Asbestos Shingles manufactured were of the natural gray color resulting from a mixture of Asbestos fibre and Portland cement. Gradually oxides were added to form various color combinations. Soft hues and blends were finally obtained, and Ambler can now offer plain colors or combinations that will harmonize with the surroundings and the various types of architecture ordinarily encountered.

The early shingles were of the diagonal "Honeycomb" type, so called because of the roof line produced. These were popular because of their low cost (less shingles per square being required) and because of their light weight. In recent years Ambler has perfected new and heavier types of asbestos shingles which have greater architectural appeal due to increased thickness

and more pronounced texture. These types are called the "Tapered Colonial" and "English Thatch."

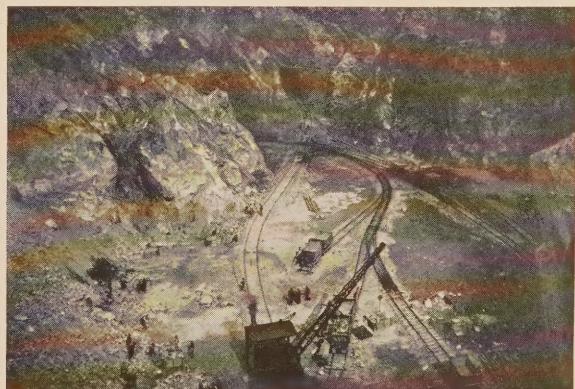
Add to this beauty of style and color the inherent qualities of the shingle itself—long life and fire safety—and you have a roof covering that meets every requirement of the home builder, architect or contractor. On the ensuing pages are presented plain facts as to the various types of Ambler Asbestos Shingles, together with a brief description of other Ambler Asbestos Products.



Richard V. Mattison, M.D., President, Ambler Asbestos Shingle & Sheathing Company and of Keasbey & Mattison Co., known as "Dean" of the asbestos industry

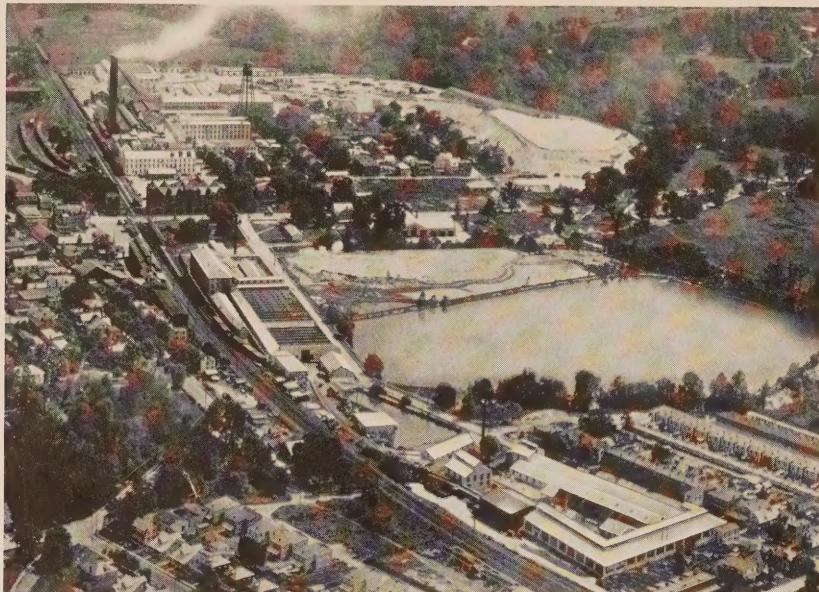


A piece of crude Chrysotile asbestos fibre just as obtained from the mine.

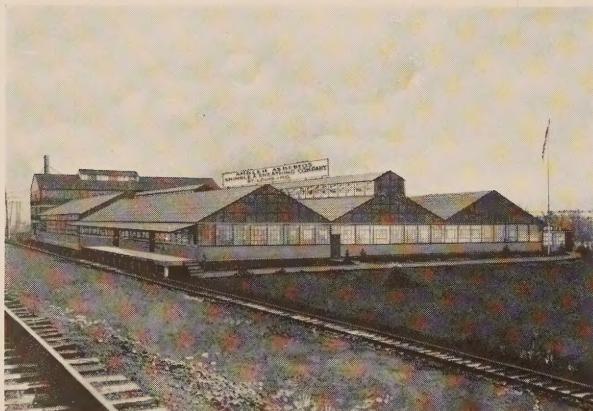


The main pit of the Bell Asbestos Mines, Thetford, Province of Quebec, Canada

Where Ambler Asbestos Products are Made



*The Factory Back of Fireproof Ambler Asbestos Products.
Aerial view of factory of the Ambler Asbestos Shingle & Sheathing Company,
Ambler, Penna.*



Plant No. 3 at St. Louis, Mo.



Ambler Shingle Plant No. 1.

AMBLER Asbestos Products include a wide range of materials designed not only for fireproof building purposes but also for heat conservation, electrical insulation, and many other uses in which the peculiar properties of Asbestos are adapted to commercial use.

To manufacture this vast array of Ambler Asbestos Products, six large modern plants are maintained, including three at Ambler, Penna., one at Cornwells Heights, Penna., where Waltile is manufactured, one at Asbestos, Penna., where Ambler Autobestos Brake Lining and Tapered "English Thatch" Shingles are

made, also a Branch Plant at St. Louis, Mo. This latter factory was constructed in 1927 to fill the growing demand for fireproof building products in the Middle West.

The asbestos used in these products is the finest grade of Chrysotile Fibre which comes from our own mines at Thetford, P. Q., Canada. We are therefore assured of a constant, uniform supply.

Thus it will be seen that Ambler is excellently equipped through its years of experience, its research facilities, and its extensive plants, to produce the "best in Asbestos."

The Ambler Duofacing Process

AT various places in this catalog reference is made to "Duoface." As the name indicates, "Duoface" Shingles are reversible and can be applied either side to the weather. One side is the natural gray resulting from the mixture of asbestos fibre and Portland cement. The other side is colored, this being produced by a process entirely novel in the manufacture of asbestos shingles.

The coloring is part of the shingle itself, and is permanent. It does not rub or brush off. Colors

produced by the Duofacing process, as developed exclusively in the Ambler plants, are rich in appearance, giving the Shingle texture and beauty heretofore unknown.

"Gray Duoface" Ambler Asbestos Shingles have on one side the conservative Newport Gray color which has stood the test of time for so many years, and on the other a variegated pattern of red, black and gray, thus affording a pleasing combination of color so popular in modern roofs.



Section of No. 16, *Gray Duoface—American Method*



Section of No. 4, *Gray Duoface—Honeycomb Method*



Part of a development in Indianapolis roofed with Ambler Duoface Shingles

Colonial Tapered Ambler Asbestos Shingles

STYLE NO. 90—American Method

THIS type combines distinctive roof lines with economy. The Colonial Tapered No. 90 shingle is $\frac{1}{4}$ inch thick at the butt.

The standard size is 9 inches by 18 inches. One square (100 square feet) requires 190 shingles, weighing approximately 525 pounds. Accessories and the various standard colors are listed below. Where the quantity warrants, other special colors may be developed under the "Duofacing" process already described.

The edges of No. 90 shingles are slightly rough to produce irregular roof lines so popular today.

Particular attention has been given to the colors of these shingles; they are soft and made to blend harmoniously. A special blend has been developed as pictured below. This is termed "Rustic Blend," and when so ordered will consist of 30% of each of three shades of purplish brown and 10% of buff. Variations of this blend are possible, as the four colors comprising it are designated by number and may be ordered in any desired proportion.

"Rustic Blend" is priced at the same cost as other colors except Green. All prices upon application.



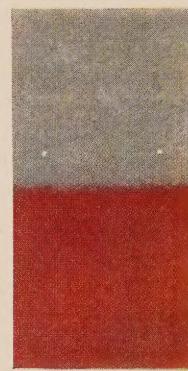
Gray Duoface



Green



Pearl Gray



Red



Black

Colors: Gray Duoface, Pearl Gray, Black, Indian Red, "Rustic Blend" and Green.

Sizes: Standard size, 9 inches by 18 inches. Random widths of 6 inches, 9 inches, 12 inches and 18 inches, also available at \$1.00 per square additional.

Starters: No. 9A (9 inches by 18 inches by $\frac{1}{4}$ inch)
67 pieces per 100 lineal feet.

Weather Exposure: 8 $\frac{1}{4}$ inches; laid American Method.

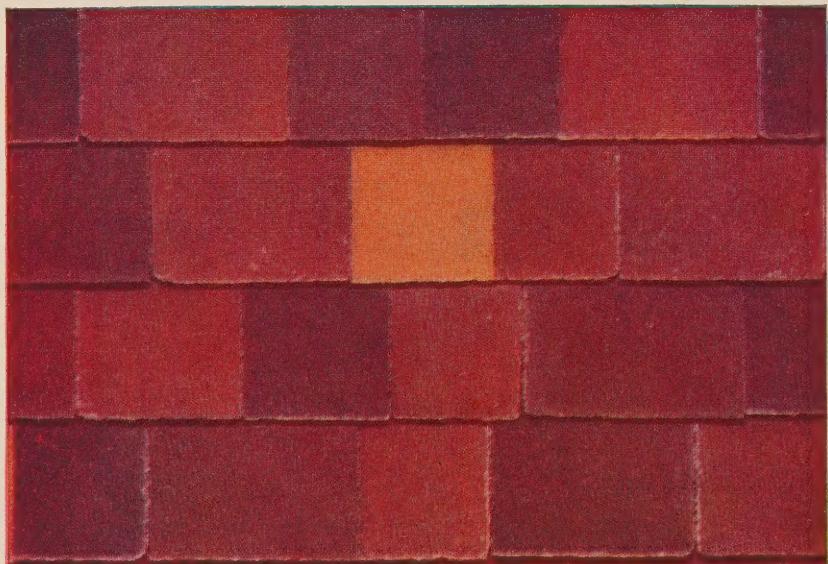
Approximate Weight: 525 pounds per square.

Accessories: Use 15-lb. roofing paper in rolls containing 432 square feet, covering 2 squares.

Widths	6 in.	9 in.	12 in.	18 in.
Shingles per square	285	190	143	95
Nails per sq. (1 $\frac{1}{4}$ " long)	2 $\frac{1}{2}$ lbs.	1 $\frac{3}{4}$ lbs.	1 $\frac{1}{4}$ lbs.	1 lb.

Rustic Blend

At the right is pictured the new special blend described above. Its name—"Rustic Blend"—refers to the soft autumnal colors produced by the three shades of purplish brown and the occasional contrasting buff. These proportions may be varied if desired without additional cost.



Specifications for Applying No. 90 Colonial Tapered Shingles American or Straight Laid Method

All roofs specified to be covered with Ambler Asbestos Shingles are to be tightly sheathed.

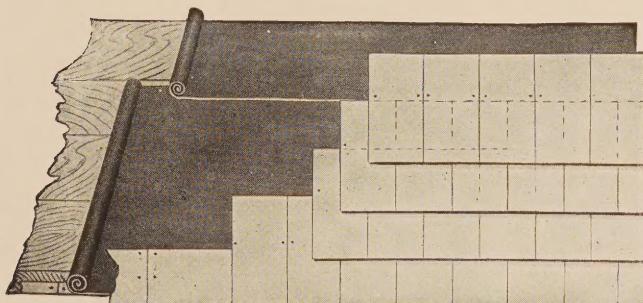
Over the sheathing boards lay waterproofing paper sold or recommended by Ambler Asbestos Shingle & Sheathing Company, tacked on with 4-inch laps, and on hips and valleys with at least 12-inch lap. At and flush with the eaves apply $\frac{3}{8}$ -inch by $1\frac{1}{2}$ -inch cant strip, then lay one course of No. 9A Starters end to end laterally, overhanging the eaves about $1\frac{1}{2}$ inches. Over these starters lay one course of No. 90 Shingles perpendicularly, with the lower edges flush with the lower edges of the starting course, and breaking joints. Weather exposure of first course should be $7\frac{1}{4}$ inches. The next course will be laid in the same manner, but exposing $8\frac{1}{4}$ inches of the shingles directly beneath it.

Balance of roof to be covered with No. 90 Colonial

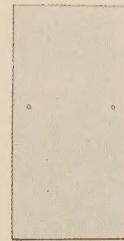
Tapered Shingles laid perpendicularly, breaking joints and exposed $8\frac{1}{4}$ inches to the weather. Each shingle is to be nailed with two $1\frac{1}{4}$ -inch shingle nails which may be purchased from the manufacturer.

Hips and ridges to be covered with Ambler Asbestos Ridge and Hip Roll (See Page 16) or according to regular Boston Hip scheme (See Page 17). Ridge and Hip roll must be properly flashed and fastened in place to hip or ridge pole of sufficient height, with galvanized nails and regular copper ridge-roll clips. All hips and ridges to be made watertight previous to the application of ridge roll.

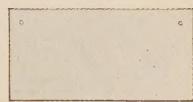
At all hips, valleys, chimneys and against all vertical surfaces, except as otherwise specified, flash and counter flash with each course, using lead, copper, zinc or galvanized iron preferably in the order mentioned.



Method of Application, Showing Starting Course



No. 90
9" x 18"



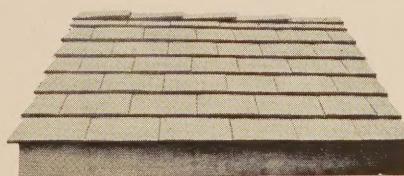
No. 9A Starter
9" x 18" x $\frac{1}{4}$ "

Half-Inch Tapered Colonial

This superior Ambler Asbestos Shingle enables architects and builders to provide a roof with delightful shadow lines. Butts can be broken or offset to break up the roof lines if desired.

Half-inch Tapered Colonial Shingles are 19 inches long and weigh 930 pounds per square. They taper from $\frac{1}{2}$ inch thick at the butt to $\frac{1}{8}$ inch thick at the

top. They are exposed 8 inches to the weather and fastened with copper nails. Random widths of 5, 8, 9, 11, 13, 15 and 17 inches are available.



Section of Half-Inch Butt, Colonial Tapered Shingle

Colors include Pearl Gray, Autumn Brown, Tuscan Red, Purple, Black and Moss Green. Various combinations of pleasing tones are possible. For specifications see English Thatch, Page 8.

Tapered "English Thatch"

TAPERED English Thatch Shingles represent the ultimate in roofing material. They produce a roof of definite charm and distinctive effects—a roof which is fireproof, fadeproof, weatherproof and *beautiful*. They provide a novel artistic effect and an added degree of serviceability. They need no paint nor preservative and, like all Ambler Asbestos Shingles, will withstand climatic changes and extremes of weather for many years without repair or replacement. Sun, rain, frost, salt air or fire are powerless to harm them.

By an exclusive process of manufacture a rough texture of unusual beauty is developed. The name, "English Thatch," arose from the similarity of this

lasting material to the old English roofs of long ago. When laid in irregular courses, or with broken butts, using the random widths available, a beautiful roof will result.

Colors: Pearl Gray, Indian Red, Tuscan Red, Autumn Brown, Black, Purple, Bronze, and Green.

Sizes: (See table below). English Thatch Shingles are $\frac{1}{2}$ inch thick at the butt.

Starters: No. 9A (9 inches by 18 inches by $\frac{1}{4}$ inch).

Weather Exposure: 8 inches.

No. Per Square: See Table Below.

Approximate Weight Per Square: See Table Below.

Weights and Sizes—Tapered "English Thatch"

8-Inch Weather Exposure	Weight per 100	No. per Square	Weight per Square	2-Inch Copper Nails per Square
6 $\frac{1}{2}$ by 20 inches	319 Pounds.	285	910 Pounds.	4 Pounds.
9 $\frac{1}{2}$ by 20 inches	484 Pounds.	192	910 Pounds.	2 $\frac{3}{4}$ Pounds.
10 $\frac{1}{2}$ by 20 inches	526 Pounds.	173	910 Pounds.	2 $\frac{1}{2}$ Pounds.
12 $\frac{1}{2}$ by 20 inches	674 Pounds.	143	910 Pounds.	2 Pounds.
14 $\frac{1}{2}$ by 20 inches	758 Pounds.	124	910 Pounds.	1 $\frac{3}{4}$ Pounds.
16 $\frac{1}{2}$ by 20 inches	866 Pounds.	109	910 Pounds.	1 $\frac{1}{2}$ Pounds.
18 $\frac{1}{2}$ by 20 inches	938 Pounds.	98	910 Pounds.	1 $\frac{1}{4}$ Pounds.

Specifications for Tapered "English Thatch"

Ambler Asbestos Shingles

Sheathing—All roofs specified to be covered with Ambler Asbestos Shingles are to be tightly sheathed with well-seasoned boards.

Felt—Over roof boards lay a 30-pound saturated asphalt felt, tacked on with 6-inch lap, and using double thickness on all hips, ridges and in valleys.

Nail a wood strip $1\frac{1}{4}$ inches by $\frac{1}{4}$ inch flush with the eaves, to give starters and shingles the proper cant. Apply one course of 9A Starters (9 inches by 18 inches by $\frac{1}{4}$ inch) end to end laterally, covering the eaves and projecting over the edge of the roof boards $1\frac{1}{2}$ inches to 2 inches.

Over and flush with the starters apply "English Thatch" Ambler Asbestos Shingles, according to the American or Straight-laid method. Details regarding random widths and various exposures shall be supplied

by the architect. We recommend that none of these "English Thatch" shingles be applied with less than a 3-inch headlap.

Each shingle is to be nailed with two copper nails of sufficient length so as to drive the nail one inch into the wood sheathing boards; nails are not to be driven down too tight to the roof. Galvanized nails can be used in place of copper if desired.

All hips and ridges shall be covered with "English Thatch" shingles 6 inches wide or any other width desired, and applied according to the Boston Hip method. If desired, the last course of shingles may be mitred on hips and ridges, thus eliminating additional covering.

Flashing—All metal flashings and counterflashings shall be 16-ounce soft cold rolled copper, using sufficient to guarantee a water-tight application.

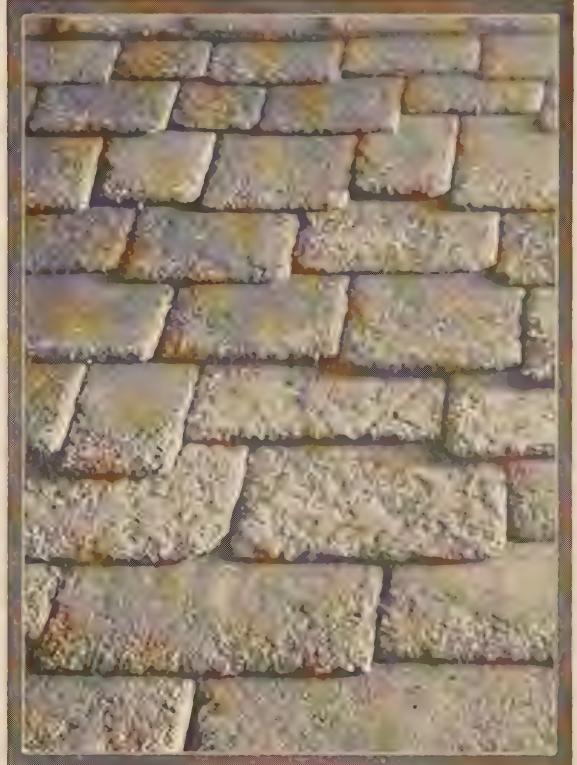
Three Popular Types of Ambler Roofs



Close-up view of No. 90 Tapered Colonial, described on Pages 6 and 7.



The conservative, economical Honeycomb Type of Ambler Asbestos Shingles are shown above; described on Pages 14-15.



Rugged, distinctive Tapered "English Thatch," in close perspective to show rich texture. See Page 8 for details.

No. 16 American Method

Ambler Asbestos Shingles—8" x 16" x 5/32"

EVERY builder is familiar with the American or "Straight-Laid" method of application, the oldest type of roof. Ambler Asbestos Shingles, $\frac{5}{32}$ inch thick, are available in the regular 8-inch by 16-inch size, also with variations such as described below, or "Standard Thatch" explained on the next page.

Colors are fadeproof, and are a part of the shingle itself, hence cannot wear or rub off. A color chart, presenting the complete range of shades available is shown on Page 11. Here is a fireproof, weather-proof shingle which will last as long as the structure beneath it.

Variations

Variations of the No. 16 Shingle include the following sizes, the colors for both types being the same as for the No. 16s:

No. 1—16 inches by 16 inches (American Method), 130 shingles to the square, approximate weight 425 pounds per square. Use No. 16A Starters (8 inches by 16 inches). Weather exposure—7 inches.

No. 6—12 inches by 12 inches (American Method), 240 shingles to the square, approximate weight 432 pounds per square. Use No. 21A Starters (6 inches by 12 inches). Weather exposure—5 inches.

Specifications for No. 16 Ambler Asbestos Shingles

Sheathing—All roofs specified to be covered with Ambler Asbestos Shingles are to be tightly sheathed with well-seasoned boards.

Felt—Over roof boards lay 1-ply asphalt felt, weighing 15 pounds to the square, tacked on with 4-inch lap, and on hips and valleys with at least 1-foot lap.

Over the felt, apply Ambler Asbestos Shingles (give color), as manufactured by the *Ambler Asbestos Shingle & Sheathing Co.*, according to the American or straight-laid method. Nail a $\frac{3}{16}$ -inch by 1-inch cant strip flush with the lower edge of roof board. Apply one course of No. 16A, 8-inch by 16-inch starters end to end laterally overhanging the eaves $1\frac{1}{2}$ inches to $1\frac{3}{4}$ inches. Over this lay one course of No. 16 shingles with long edge at right angles to eave line breaking joints, exposing 6 inches to the weather. Lay next course in same way, allowing 7

Details of No. 16 Shingles

Colors: Gray Duoface, Pearl Gray, Red, Brown, Black, Purple, Buff and Green.

Sizes: 8 inches by 16 inches by $\frac{5}{32}$ inch.

Starters: No. 16A (8 inches by 16 inches by $\frac{5}{32}$ inch).

Weather-Exposure: 7 inches.

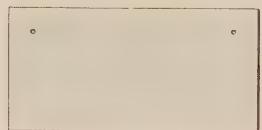
No. Per Square: 260.

Approximate Weight: 416 pounds per square.

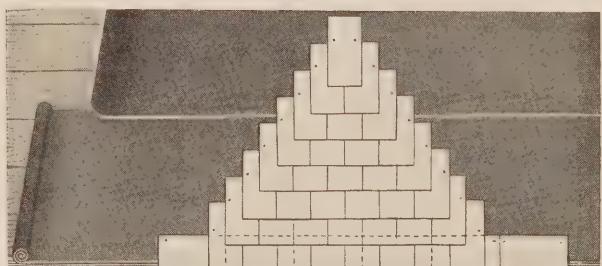
Accessories: Each square requires $2\frac{1}{2}$ pounds of $1\frac{1}{4}$ -inch Galvanized Iron Nails. Use 15-pound waterproofing paper in rolls containing 432 square feet, covering 4 squares.



No. 16
8" x 16"



No. 16A Under Eave
Starter 8" x 16"



American or Straight Laid Method of Application
Showing Starting Courses at the Eaves

inches exposure. Balance of roof to be covered with No. 16 shingles, 8 inches by 16 inches, laid perpendicularly, breaking joints and exposed 7 inches to the weather. Each shingle to be nailed with two $1\frac{1}{4}$ -inch galvanized iron needle point nails as indicated by the nailhole in the shingles; nails not to be driven down too tight. Hips and ridges to be covered with Ambler Asbestos ridge and hip roll, fastened to hip or ridge pole of sufficient height, rabbeted to fit hip or ridge, fastening ridge roll with regular copper fasteners made for this purpose. All hips and ridges to be made watertight previous to the application of the ridge roll. (Hip and ridge can be covered according to regular *Boston Hip* scheme if desired).

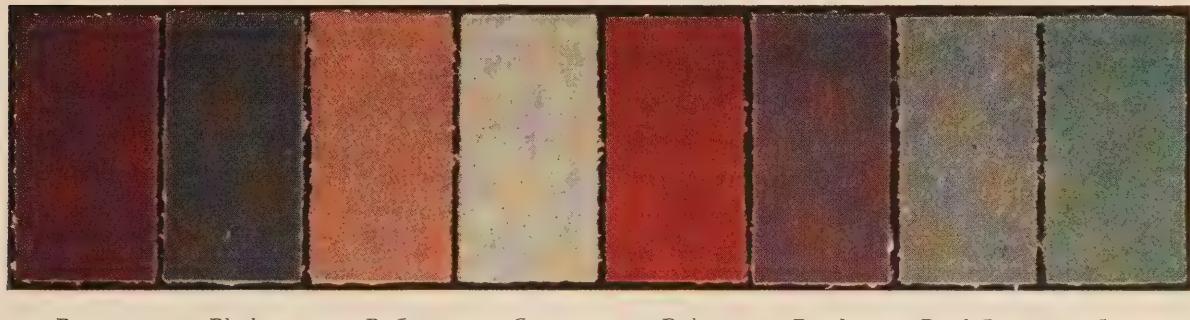
Flashing—At all hips, valleys, chimneys, and against all abutting sidewalls, except as otherwise specified, flash and counter-flash with each course of Ambler Asbestos Shingles, using copper, etc.

No. 16 American Method—Continued

THE range of colors available in both the No. 16, No. 4 and No. 20 Ambler Asbestos Shingles as described here and on page fourteen of this catalog, is shown below. An addition to this color chart is the Gray Duoface Shingle pictured on page five—a pleasing combination of red, black and gray. These

colors, like all Ambler colors, are fadeproof.

Prices of these and other Ambler Asbestos Shingles will be sent to any dealer, contractor or home owner upon application. A clearly written article on "How to Apply Asbestos Shingles" is available upon request.



Brown

Black

Buff

Gray

Red

Purple

Pearl Gray

Green

"Standard Thatch"

AN interesting variation of the regular 8-inch by 16-inch American Method shingle is produced in the application known as "Standard Thatch," butts being broken irregularly at the factory in order to produce uneven roof lines so popular today. Typical "Standard Thatch" roofs are pictured below.

Colors, size, exposure and other details are the same

as for the regular No. 16 Shingle described on the preceding page. We recommend "Standard Thatch" for those homes where a distinctive roof at reasonable cost is desired.

Experienced roofers have produced this effect with the regular No. 16 Shingles by breaking butts on the job.



A Cleveland Home with a "Standard Thatch" roof in variegated colors



St. Louis Star Model House roofed with "Standard Thatch"

No. 30 Side Lap, Ambler Asbestos Shingles

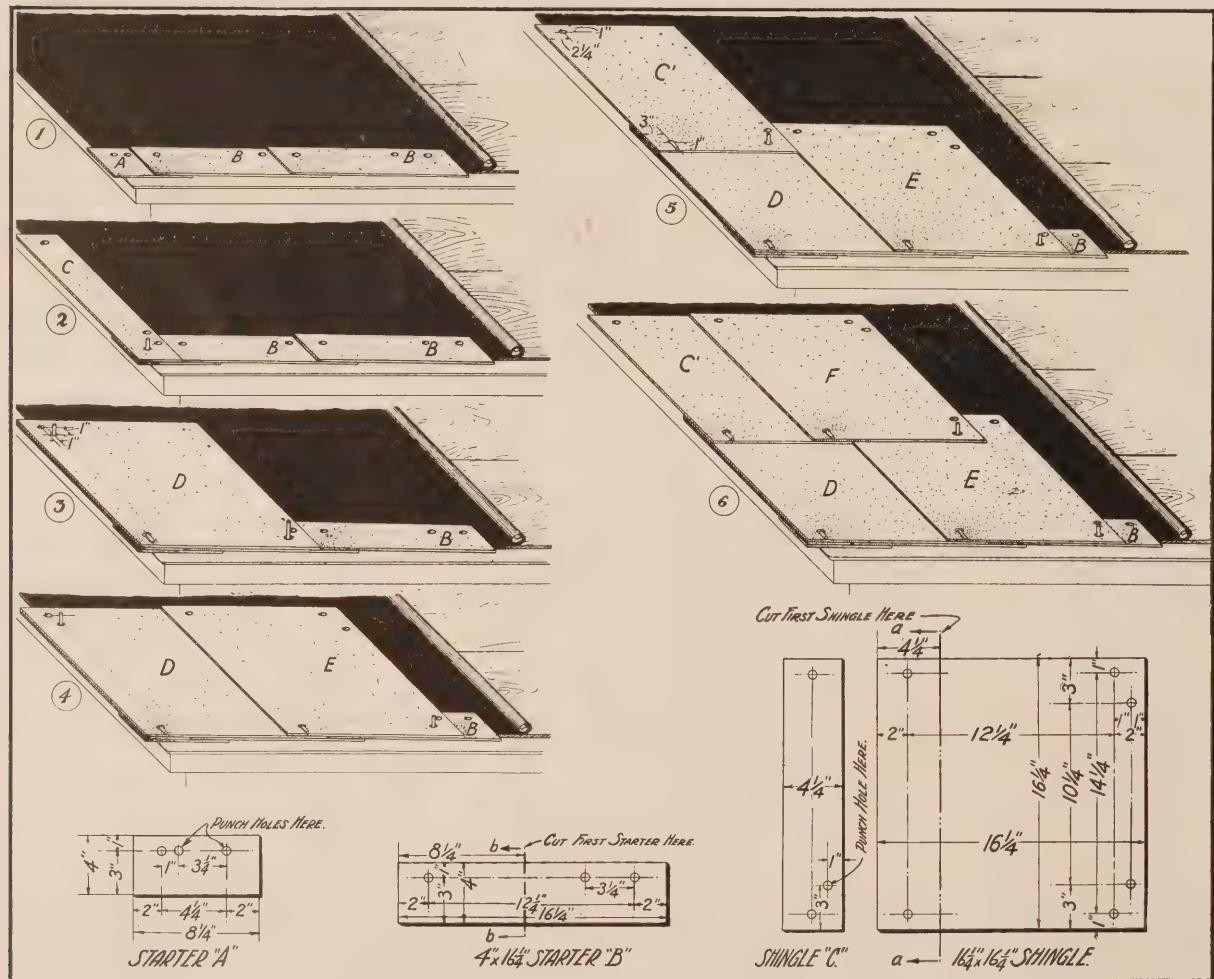
(Dutch Lap Method of Application)

THE No. 30 Side Lap Ambler Asbestos Shingles provide an economical method of roofing or siding, and are recommended for roofs of sufficient pitch or as a fireproof, attractive side wall.

Less shingles are required per square, which means economy. When properly sheathed and laid according

to manufacturers' specifications a fireproof, weather-proof roof or sidewall results.

These shingles are $16\frac{1}{4}$ inches by $16\frac{1}{4}$ inches by $\frac{5}{32}$ inch and lay 93 shingles to the square. Their colors include: Gray Duoface, Pearl Gray, Red, Black, and Green.



Specifications

Roof should first be tightly sheathed and covered with water-proofing paper, with joints lapped at least $3\frac{1}{2}$ inches. Lay paper vertically in valleys and sheath and nail parallel to sheathing boards.

The following specification covers laying from left to right, although the shingles may be laid either way. Starters (30-B) are 4 inches by $16\frac{1}{2}$ inches.

From the left side of one 4-inch by $16\frac{1}{4}$ -inch Starter cut a piece $8\frac{1}{4}$ inches along line "b-b," as shown on the sketch, forming Starter marked "A" on Sketch

No. 1. Punch two holes in Starter "A" one, 1 inch to the right and one, $4\frac{1}{4}$ inches to the right of hole originally in Starter "A," three inches from bottom edge, then nail in place, allowing one inch projection over eave and approximately $\frac{3}{4}$ -inch projection over gable side. Nail the balance of the Starters over the entire eave length with full sized Starters, $16\frac{1}{4}$ inches long as shown at "B," sketch No. 1, using the nail holes as spacers and taking special care to keep the nail holes in a horizontal line.

Specifications—Continued

Cut a $4\frac{1}{4}$ -inch wide strip from the left side of a $16\frac{1}{4}$ -inch by $16\frac{1}{4}$ -inch Shingle as shown on print, along line "a-a." Punch a hole 1 inch from the right edge and 3 inches up from the lower edge as shown on sketch of Shingle "C." Nail in place over Starter "A," slipping a storm nail in the lower hole, using two galvanized needle point nails for fastening in the two remaining holes. (See views No. 1 and No. 2).

In a full sized Shingle, punch a hole in upper left corner, 1 inch below existing hole and 1 inch to the right, as shown on sketch No. 3. Slip lower left hole over storm nail protruding from Shingle "C," insert two copper storm nails, one in upper left storm nail hole just punched, and the other in the lowest hole in right lower corner of Shingle. Nail down Shingle "D" with two galvanized iron driving nails at upper left and lower right hand corner. Bend down storm nail in lower left corner.

Next apply shingle "E," slipping lower left corner hole over copper storm nail and inserting copper storm nail in lower right hand hole. Nail down same as

shingle "D" and bend down left-hand copper storm nail. Continue the entire course in this same manner.

Start second course by taking remaining piece cut from first shingle "C," punching a storm nail hole in same 1 inch above lower edge and 3 inches from left hand edge and also punching a driving nail hole at upper left corner $2\frac{1}{4}$ inches from the left edge and 1 inch from the top. (See drawing No. 5). Slip Shingle over storm nail protruding from first course and insert copper storm nail in lower right hand hole. Nail down with two galvanized iron driving nails, one at upper left corner and other at lower right hand corner, bending down the left hand copper storm nail.

Next take a full sized Shingle "F," slipping same over copper storm nail at lower left, inserting copper storm nail at lower right hand corner of Shingle. (See drawing No. 6). Nail same as Shingle "C" with galvanized iron driving nails. Continue to end of roof.

Start next course similar except cut first shingle to proper size and repunch similar to C-1. Continue up entire roof to top in like manner.



At the right is a close-up of Gray Duoface No. 30 Side Lap Ambler Asbestos Shingles.



The house at the left has been roofed with No. 30 Side Lap Shingles.

Honeycomb Type, Ambler Asbestos Shingles

Nos. 4 and 20

THE advantages of the so-called "Honeycomb" method of applying Ambler Asbestos Shingles are the reduced cost of both material and application, and the reduced weight of the completed roof.

This method may be used on nearly every class of structure where there is sufficient pitch of roof. By this method the nails used in one shingle are entirely independent of any other shingle, thus allowing for

expansion and contraction, without placing an unusual strain on either the fastenings or the shingles.

We recommend the Honeycomb method without hesitancy to all who desire a serviceable, fire-safe roof at moderate cost. No matter under what atmospheric conditions they may be applied, Ambler Asbestos Shingles, well laid, form the best roof available.

No. 4

Colors: Gray Duoface, Pearl Gray, Red, Brown, Black, Purple, Buff and Green.

Size: 16 inches by 16 inches by $\frac{5}{32}$ inch.

Starters: No. 16B (4 inches by 16 inches); No. 4A (20 $\frac{1}{2}$ inches wide).

Weather Exposure: 13 inches by 13 inches.

No. Per Square: 87.

Approximate Weight: 283 pounds per square.

Accessories: Each square requires 1 pound 1 $\frac{1}{4}$ -inch galvanized nails and 90 copper storm nails. Use 15-pound waterproofing paper in rolls of 432 square feet covering 4 squares.

No. 20

Colors: Gray Duoface, Pearl Gray, Red, Brown, Black, and Green.

Size: 12 inches by 12 inches by $\frac{5}{32}$ inch.

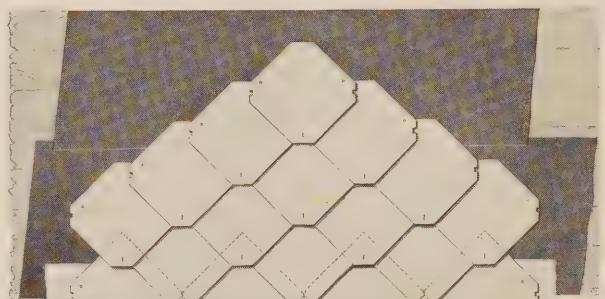
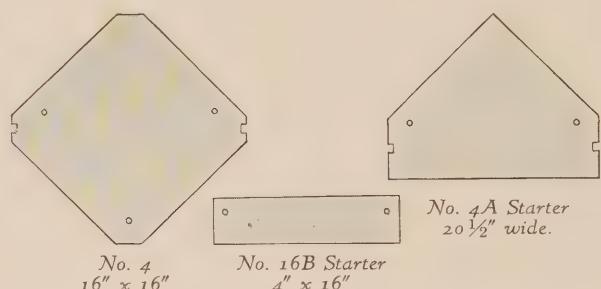
Starters: 16B (4 inches by 16 inches by $\frac{5}{32}$ inch); 20A (15 $\frac{1}{4}$ inches wide).

Weather Exposure: 9 $\frac{1}{2}$ inches by 9 $\frac{1}{2}$ inches.

No. Per Square: 162.

Approximate Weight: 292 pounds per square.

Accessories: Each square requires 1 $\frac{1}{2}$ pounds 1 $\frac{1}{4}$ -inch galvanized nails and 165 copper storm nails. Use 15-pound waterproofing paper in rolls of 432 square feet covering 4 squares.



Honeycomb Type (French Method of Application) showing starting courses at the eaves

Specifications for No. 4 Honeycomb Type, Ambler Asbestos Shingles

Sheathing—All roofs specified to be covered with Ambler Asbestos Shingles are to be tightly sheathed with well-seasoned boards. Over the sheathing boards lay 1-ply asphalt waterproofing felt weighing at least 15 pounds to the square, tacked on with 4-inch laps, and on hips and valleys with at least 12-inch lap.

Over the felt, apply Ambler Asbestos Shingles (give color), as manufactured by the Ambler Asbestos Shingle & Sheathing Company, according to the Honeycomb Method. Apply one course of No. 16B end to end overhanging the eaves 1 $\frac{1}{2}$ inches to 1 $\frac{3}{4}$ inches over which lay a course of No. 4A entirely covering the No. 16B exposed 13 inches by 13 inches to the weather. Each shingle to be nailed with two

1 $\frac{1}{4}$ -inch galvanized iron needle-point nails, and the No. 4 to be fastened down at the tip with the patented copper "storm" nails. Hips and ridges to be covered with Ambler Asbestos ridge and hip roll, fastened in place to hip or ridge pole of sufficient height, rabbeted to fit hip or ridge with regular copper fastener made for this purpose. All hips and ridges to be made watertight previous to the application of the ridge roll.

At all hips, valleys, chimneys and against all vertical surfaces, except as otherwise specified, flash and counterflash with each course of Ambler Asbestos Shingles, using copper, etc.

Re-Roofing Suggestions

THE method of re-roofing depends in part on the condition of the old roof. If it is rotted, decayed, split and soft, it may not provide a proper foundation for fastening of new shingles. The old roof if in such a bad condition should be removed and new sheathing laid as a sound foundation for the permanent roof of Ambler Asbestos Shingles.

If, however, the roof structure is still sound and the supporting timbers are staunch, the old shingles may be left on the roof. It is recommended that a strong heavy roofing paper be laid over the roof to form an even, smooth surface. Nails of sufficient length ($1\frac{1}{2}$ inches to 2 inches) to reach through the old roofing into the lath should be used.

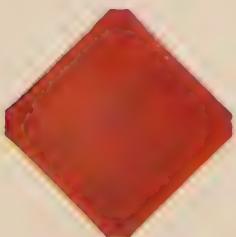


The advantages of laying Ambler Asbestos Shingles over the old roof may be summarized as follows:

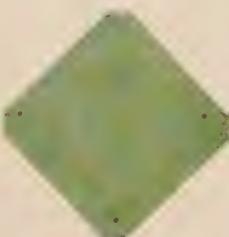
1. Lower cost, as labor of removing old shingles and cleaning up the ensuing dirt and chips is saved.
2. Less dirt in and around the house, and no danger

of a sudden rain pouring in through the bare sheathing.

3. No damage to shrubbery or paint.
4. Added insulation against heat escapage by having the extra covering under the new permanent roof of Ambler Asbestos Shingles.



Two of the eight colors available in the No. 4 Honeycomb Type of Ambler Asbestos Shingles. Either the Red, at the left, or the Green, at the right, makes an attractive, life-time roof for any home.



Ridge Roll

BELOW are shown sketches which explain the application of Ambler Asbestos Ridge Roll, which is furnished in the same colors as No. 4 Shingles, namely, Gray Duoface, Pearl Gray, Red, Brown, Black, Purple, Buff and Green.

All shingles are laid over waterproofing paper and joined closely together at the ridge, the joint being well protected by puttying with best grade of slaters' cement, completely covering the joint.

The ridge pole (2 inches by 2 inches) is then notched to fit over ridge of roof and securely fastened

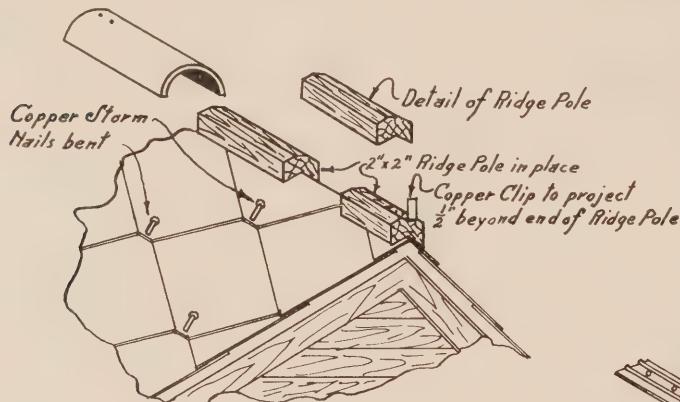
in place, first applying slaters' cement to the underside of the pole. The first copper clip is attached directly to the ridge pole, allowing the clip to project about $\frac{1}{2}$ inch beyond end of ridge pole.

When closed-end ridge roll is used, the contractor can start from both ends and work towards the middle, cutting the last piece to fit.

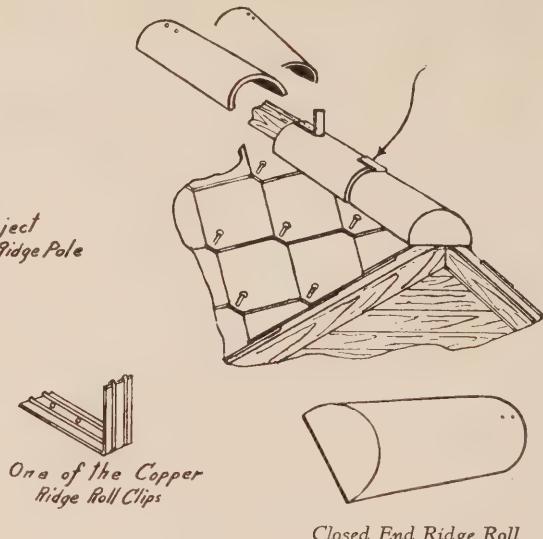
Ambler Asbestos Ridge Rolls are 16 inches long, laid with a 2-inch lap. There are 86 pieces required for 100 lineal feet. The approximate weight is $2\frac{3}{4}$ pounds per piece.

THE RIDGE ROLL AND THE COPPER RIDGE ROLL CLIP

Open End 16" Ridge Roll



Copper Clips bent down flat to secure Ridge Roll in place



Closed End Ridge Roll

Storm Nails

Figure 1.

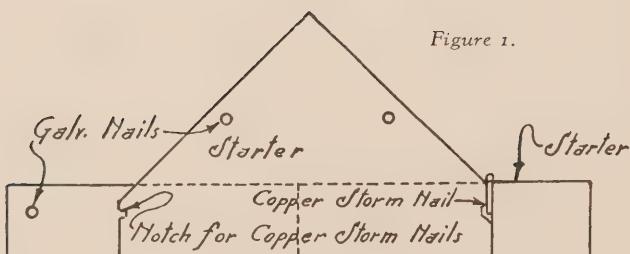
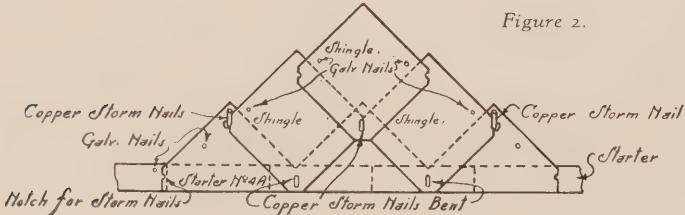


Figure 2.



In the application of No. 4 Shingles the drawings opposite will be helpful.

The copper storm nail is placed in position (see Figure 1), by resting the large octagonal head on the shingle beneath (first course below) and pushed half way underneath the shingle immediately above. (Starter No. 4A.) The next shingle in the same course is then placed in position, allowing the shank of the copper storm nail to stand upright. The No. 4 shingle is then applied, as shown in Figure 2, allowing the shank of the copper storm nail to project through the hole punched in the lower point of the shingle, nailing this No. 4 shingle with the two galvanized nails in the other holes provided. The shank of the copper storm nail is now bent downwards, which holds the point of the No. 4 shingle to the roof. Another storm nail is then placed in the notch provided on each edge of the shingle, the shank of which will project through the courses of No. 4 shingles applied above it.

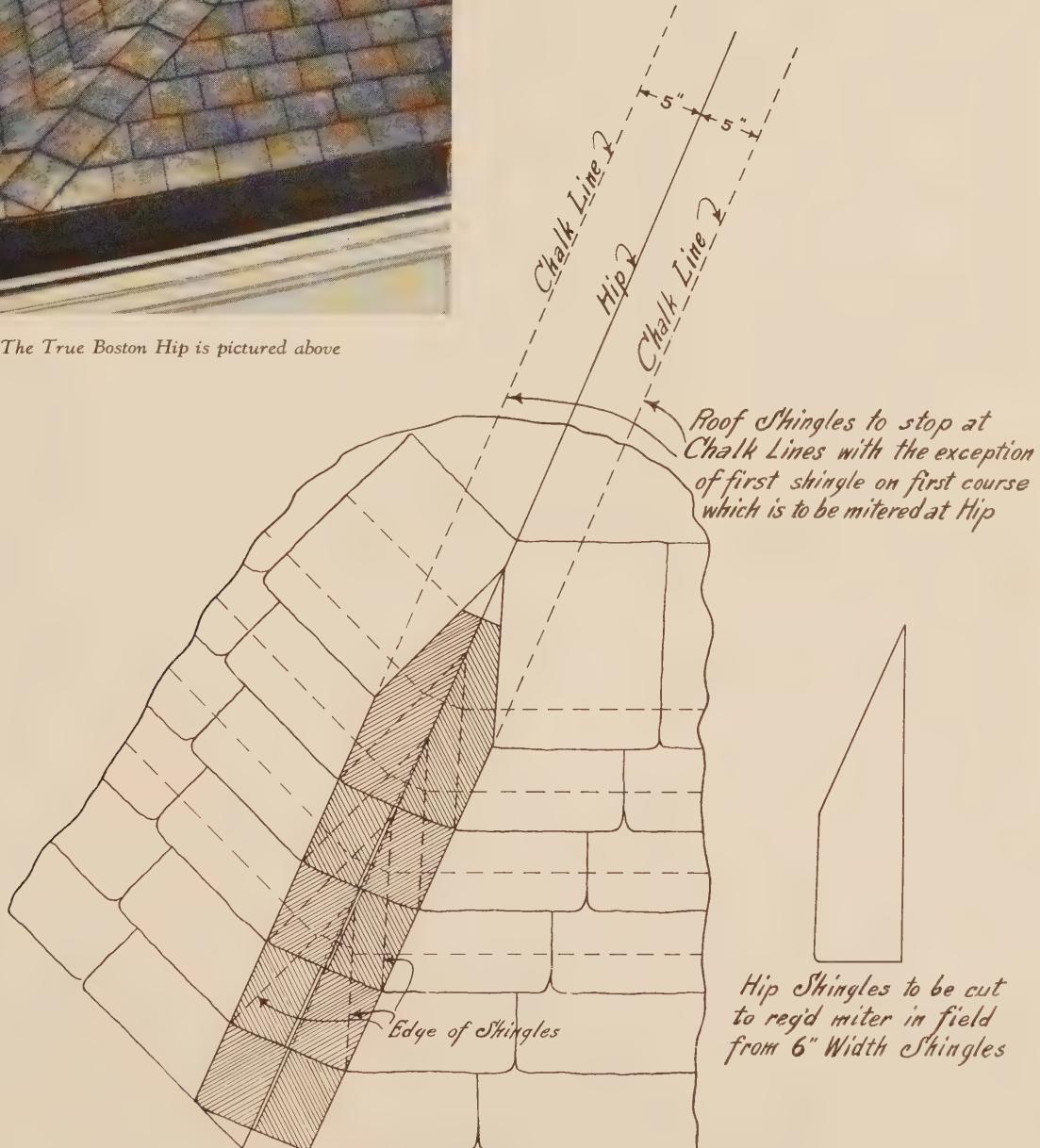
Boston Hip

THE Boston Hip is used increasingly to finish off Ambler Asbestos Shingles at the hips and ridges. The sketch and photograph below illustrate an approved method of cutting shingles to fit on the hip

and applying by the Boston Hip method. This method has gained in favor in recent years over the former plan of using Ridge Roll.

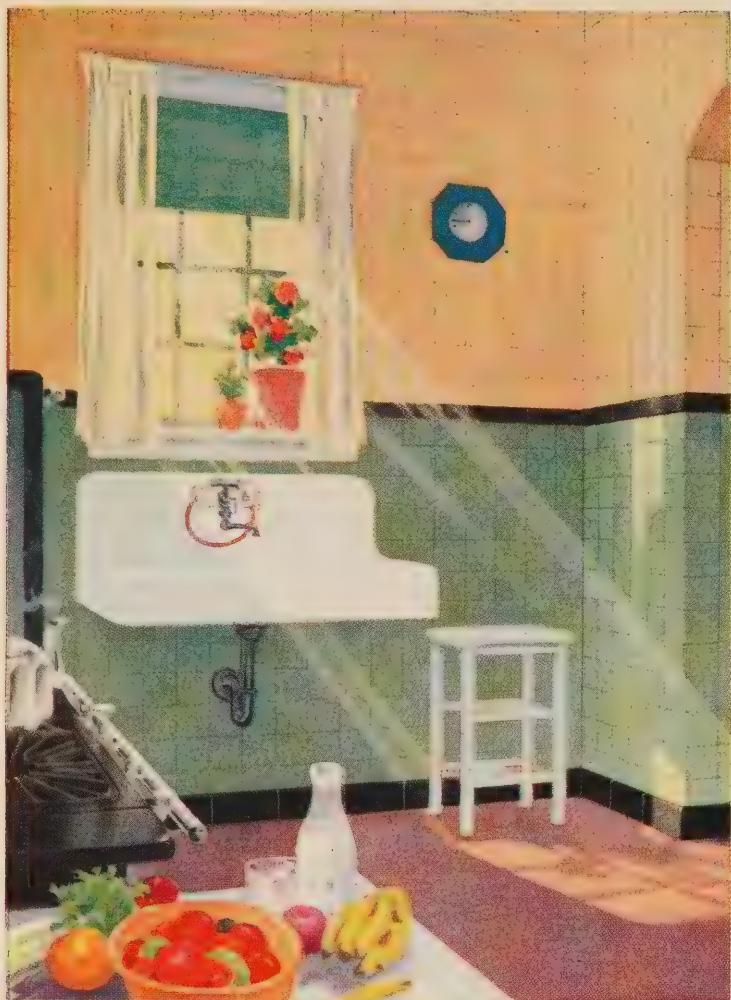


The True Boston Hip is pictured above



METHOD of APPLYING BOSTON HIP
Hip Shingles shown by Shaded Lines

Ambler Asbestos "Waltile"



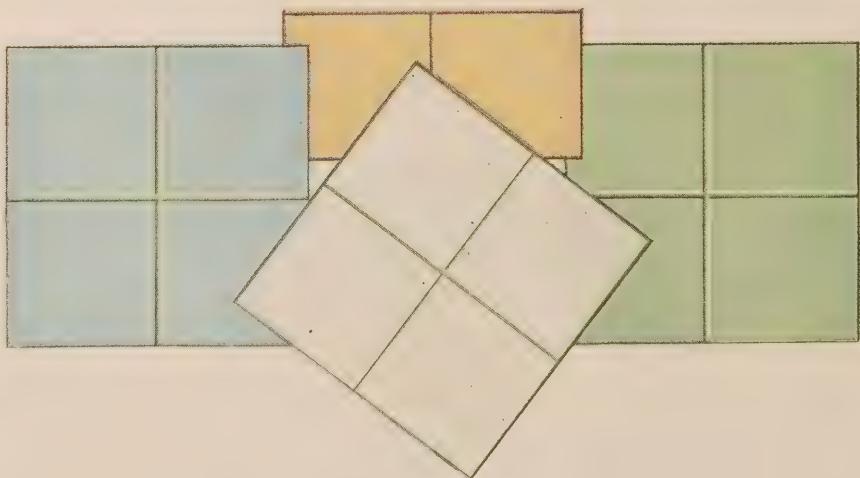
At the right are four of the charming shades available in Ambler Asbestos Waltile. The Apple Green, Jersey Cream, White and Nankin Blue are here pictured. Other colors include Smoke, Pink and Black.

AMBLER Asbestos "Waltile" fulfills the demand for color in the home and furnishes an attractive, cheerful wall covering for kitchens, bathrooms, pantries, offices, corridors, sun porches, dinettes, etc.

Ambler Asbestos "Waltile" is a fire-safe, decorative asbestos-cement board with a glossy finish ready for application to old or new walls. It needs no painting, being finished in seven attractive colors at the factory.

It is made in sheets 32 inches by 48 inches, $\frac{3}{16}$ inch thick, scored every four inches for tile effect. The colors include White, Black, Smoke, Cream, Pink, Apple Green and Nankin Blue. Cap, band and base mouldings are provided by the manufacturer to match the sheets; cap and band mouldings are 2 inches wide and base mouldings 4 inches wide, being scored every 8 inches.

Ambler Asbestos "Waltile" can be cut to fit any wall surface. In new construction it may be nailed directly to the studding, but wood sheathing is recommended for a backing. On masonry walls it may be cemented with a plastic compound furnished by the manufacturer.



Ambler Asbestos "Waltile"

"Waltile" is fire-safe, water-proof and stain-proof. Women like it because of its color and the ease with which it is kept clean. In modernization work "Waltile" is very practical. It beautifies any home.

Recommendations for application accompany each shipment and will be sent on request.

Ambler Asbestos "Waltile" is the newest member of the Ambler family. It was produced after years of experimentation and research.

Its superiority to any other finished or unfinished wallboard on the market today is easily proven by tests made in the Ambler laboratories. Sheets of this material have been scrubbed three times daily for more than one year, yet the high gloss on the

surface shows no indication of deterioration.

Another test to which "Waltile" has been submitted is the "immersion" test in which the samples were immersed in water 22 hours out of every 24 for a period of thirty weeks, at the end of which time the samples appeared as bright and strong as before the test started.

"Waltile" appeals immediately to the housewife because of its beautiful color, its highly polished surface and the ease with which it may be cleaned. There are many rooms in every American home which will be greatly improved and brightened by the use of Ambler Asbestos "Waltile."

Prices upon application.



A truly modern bathroom at a reasonable cost, with Ambler Asbestos "Waltile"

Ambler Linabestos

AMBLER Linabestos is a fireproof asbestos-cement board of uniform thickness, even texture and density. It has a pleasing natural buff color, requiring no painting, hence is economical for exterior or interior sheathing.

If desired, it may be sized and painted to conform to any decorative scheme. It is made in sheets 48 inches by 48 inches and 48 inches by 96 inches, in thicknesses of $\frac{3}{16}$ inch, $\frac{1}{4}$ inch and $\frac{3}{8}$ inch.

Ambler Linabestos is also furnished in a gray color, indented for tile effect, in 4-inch square block markings, or in 3-inch by 6-inch staggered joint indentations. Sizes of indented Linabestos are 48 inches by 48 inches, and 48 inches by 96 inches, in the $\frac{3}{16}$ -inch thickness only. This type is used for economical bathroom wainscoting.

Features of Ambler Linabestos

- Cannot ignite or burn.
- Easily worked with saw and hammer.
- Natural Buff Color.
- May be sized and painted if desired.
- Proof against rats or vermin.
- No paper facing.
- Weather-resistant—use it indoors or out.
- Does not crack or split.



Ambler Linabestos used on exterior with battens to produce striking half-timbered effect

Uses

Ambler Linabestos has many varied uses, some of which are listed below. Many more will suggest themselves to the builder because of the unusual characteristics of the material.

- Fireproof sheathing for exterior or interior.
- Fire protection around furnaces or under stairs.
- Lining of attics, garages, basements, etc.
- Sorting tables and shelves in stores and factories.
- Radiator covers.
- Economical bathroom and kitchen wainscoting.
- Poultry house construction.

Fire losses in the United States continue to grow because of congested building conditions in thickly populated cities, most of which now have ordinances prohibiting the use of inflammable building materials. Ambler Linabestos will meet the approval of your Building Inspector for fire-safe construction. This is particularly important in built-in garages, and the local Building Code should be examined to ascertain the approved thickness.

Prices upon application.



Indented Linabestos, painted, makes an economical and attractive wainscoting for bathroom or kitchen

Ambler Asbestos Corrugated Roofing and Siding

AMBLER Asbestos Corrugated Sheathing is made of Asbestos fibre and Portland Cement hydraulically compressed, forming a weatherproof and fireproof construction material of wide use.

These sheets are 42 inches wide and measure $1\frac{1}{2}$ inch thick on the ridges and in the valleys, and $\frac{9}{32}$ inch thick at center of slope. Corrugations are $2\frac{5}{8}$ inches, center to center. Sheets are available in lengths of 4, 5, 6, 7, 8, and $8\frac{1}{2}$ feet. This material weighs approximately $3\frac{3}{4}$ pounds per square foot. All accessories are furnished by the manufacturer.

In addition to the plain Gray, Ambler offers a mottled Red and Gray, and a Dark Red corrugated, the latter at a slight increase in price over the standard sheets. These colors will appeal to the concern seeking color to "dress up" its buildings.

Ambler Asbestos Corrugated Sheathing is used for

roofing and siding of factories, warehouses, elevators, garages and other industrial buildings. It forms an economical material which will withstand fire, weather and rough usage.

Ambler Asbestos Corrugated Sheets require practically no upkeep expense, no painting, no replacing of sheets, and the clean, attractive appearance which they give to an industrial building is another reason well worth thoughtful consideration.

Ambler Asbestos Corrugated roofing and siding is comparatively light in weight, is extremely hard, dense in texture, waterproof, fireproof, and possesses in common with all concrete products that unique virtue of becoming harder, tougher and more weather resistant the longer it is exposed to the action of the elements.

For full details, ask for Engineers' Data Sheets.



Office, Warehouse and Yard of a building supply dealer who used Ambler Asbestos Corrugated on the roof of the Warehouse, Ambler Asbestos Shingles on the Office roof and Ambler Linabestos on sides of office and warehouse.



Factory of Keystone Portland Cement Company, Bath, Penna., where Ambler Asbestos Corrugated Sheathing was used on sides, roofs and galleries.

Ambler Asbestos Lumber

THIS is a long-fibred asbestos product so manufactured as to produce a dense sheet of great strength and minimum porosity. It is highly shock-resistant. It is gray in color and has a pleasing two-tone effect which requires no painting. It is easy to work. The uses of Ambler Asbestos Lumber in the

industrial field include electrical cell structures, fire-proof partitions, exterior or interior sheathing, etc.

Ambler Asbestos Lumber is furnished in sheets 36 by 48 inches, 42 by 48 inches and 42 by 96 inches, in thicknesses from $\frac{1}{8}$ inch to 4 inches inclusive. Prices upon application.



Bath houses being constructed of Fireproof Ambler Asbestos Lumber.



Cell Compartments of Ambler Asbestos Lumber in electrical installation.

Ambler Ebonized Asbestos

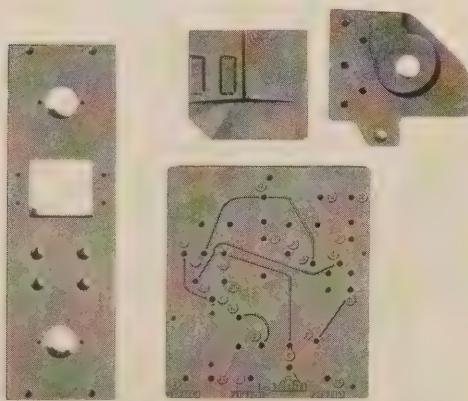
Ambler Ebonized Asbestos is a specially constructed and specially treated asbestos board which fully meets the exacting requirements of the electrical engineer or electrical manufacturer for switchboard and panel work.

It is made in sheet form, in sizes 36 by 48 inches, 42 by 48 inches and 42 by 96 inches, in thicknesses from $\frac{1}{8}$ inch up to 4 inches. It has exceptionally high dielectric strength, and is easily worked, free

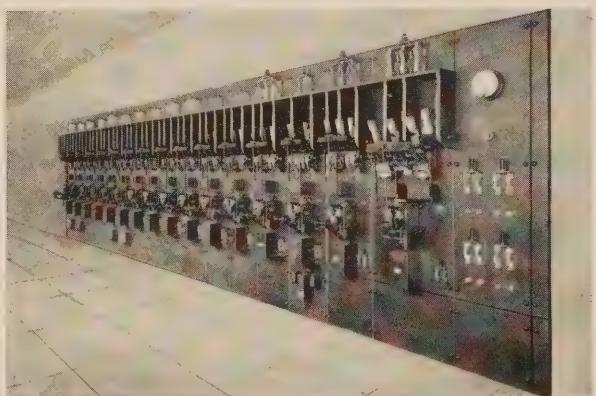
from metallic ingredients, and impervious to climatic changes.

Ambler Ebonized Asbestos is approved by the Underwriters' Laboratories, Inc., of Chicago, and meets all specifications of the Bureau of Engineering, United States Navy. Write for special catalog.

Ambler also manufactures Cold Moulded Products for electrical manufacturers and public utilities, of various types and properties. The Ambler Electrical Catalog also explains these in detail.



Pieces of Ambler Moulded Ebonized Asbestos



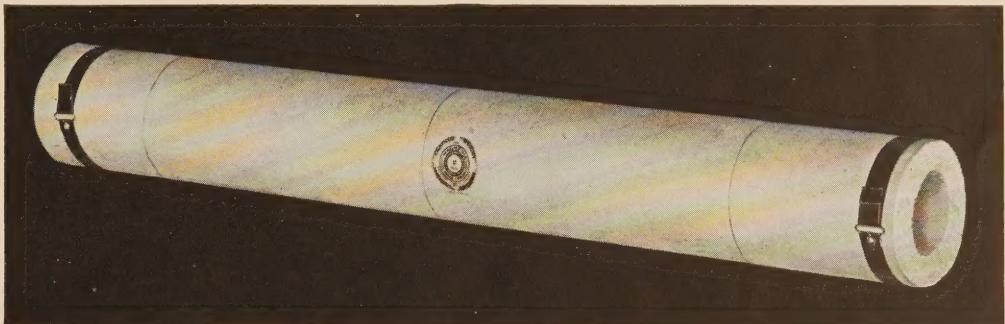
A typical switchboard made of Ambler Ebonized Asbestos

KEASBEY & MATTISON COMPANY

Affiliated with Ambler Asbestos Shingle & Sheathing Company, with Factories at Ambler, Penna.

KEASBEY & MATTISON COMPANY is one of the pioneer manufacturers of asbestos and magnesia products, and operates perhaps the world's largest asbestos textile mills at Ambler. It mines asbestos from its own mines at Thetford, P. Q., Canada, and from Bear Canyon, Arizona. Controlling

its own sources of raw material, and with skilled artisans who have been producing asbestos textiles and coverings for many years, it is in a pre-eminent position in the asbestos industry. This company originated 85% Magnesia, the best pipe and boiler insulation.



List of Products

"Featherweight" 85% Magnesia Pipe and Boiler Covering.

Ambler High Temperature Covering and Blocks.

Ambler Asbestos Aircell Pipe Covering.

Ambler Asbestos Cement.

Ambler Asbestos Paper and Millboard.

Ambler Asbestos Gaskets, Packings, Textiles and Garments of all descriptions.

Ambler Safety Curtains of Asbestos.

Ambler Autobestos Brake Lining, Pump Packing Rings and Clutch Facings.

Write for New Catalog of K. & M. Products



"Above All—Lasting Protection"



Ambler Asbestos Shingles lend the crowning touch to this charming suburban home. These are No. 16 American Method Shingles in variegated colors



The picture above shows how much of the vision the roof occupies. A good-looking roof that really is good—Ambler Asbestos Shingles, made by

AMBLER ASBESTOS SHINGLE & SHEATHING COMPANY

Ambler, Penna.

St. Louis, Mo.

Printed in U. S. A.

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